



Welcome United States Patent and Trademark Office

## Search Results

[BROWSE](#)[SEARCH](#)[IEEE XPLORE GUIDE](#)[SUPPORT](#)

Results for "( pci express\*<in>metadata ) and mode"  
Your search matched 9 of 1302021 documents.

A maximum of 100 results are displayed, 25 to a page, sorted by **Relevance in Descending** order.

e-mail printer friendly

## » Search Options

[View Session History](#)[New Search](#)

## Modify Search

☐ Check to search only within this results set





 Display Format: ☒ Citation ☐ Citation & Abstract

## » Key

IEEE JNL	IEEE Journal or Magazine
IEE JNL	IEE Journal or Magazine
IEEE CNF	IEEE Conference Proceeding
IEE CNF	IEE Conference Proceeding
IEEE STD	IEEE Standard

Select Article Information

- ☐ 1. **Can memory-less network adapters benefit next-generation Infiniband systems?**  
 Sur, S.; Vishnu, A.; Jin, H.-W.; Panda, D.K.; Huang, W.;  
 High Performance Interconnects, 2005. Proceedings. 13th Symposium on  
 17-19 Aug. 2005 Page(s):45 - 50  
 Digital Object Identifier 10.1109/CONNECT.2005.10  
[AbstractPlus](#) | Full Text: [PDE\(200 KB\)](#) [IEEE CNF](#)
- ☐ 2. **Evaluating InfiniBand performance with PCI Express**  
 Jiuxing Liu; Mamidala, A.; Vishnu, V.; Panda, D.K.;  
 Micro, IEEE  
 Volume 25, Issue 1, Jan.-Feb. 2005 Page(s):20 - 29  
 Digital Object Identifier 10.1109/MM.2005.9  
[AbstractPlus](#) | Full Text: [PDE\(160 KB\)](#) [IEEE JNL](#)
- ☐ 3. **IBIST/spl trade/ (interconnect built-in-self-test) architecture and methodology for PCI Express**  
 Nejedlo, J.J.;  
 Test Conference, 2003. Proceedings. ITC 2003. International  
 Volume 2, 30 Sept.-2 Oct. 2003 Page(s):114 - 122 Vol.2  
 Digital Object Identifier 10.1109/TEST.2003.1271201  
[AbstractPlus](#) | Full Text: [PDE\(563 KB\)](#) [IEEE CNF](#)
- ☐ 4. **A digitized LVDS driver with simultaneous switching noise rejection**  
 Hsin-Wen Wang; Hung-Wen Lu; Chau-Chin Su;  
 Advanced System Integrated Circuits 2004. Proceedings of 2004 IEEE Asia-Pacific Conference on  
 4-5 Aug. 2004 Page(s):240 - 243  
 Digital Object Identifier 10.1109/APASIC.2004.1349460  
[AbstractPlus](#) | Full Text: [PDE\(440 KB\)](#) [IEEE CNF](#)
- ☐ 5. **Localized congestion control in advanced switching Interconnects**  
 Krishnan, V.; Mayhew, D.;  
 Micro, IEEE  
 Volume 25, Issue 1, Jan.-Feb. 2005 Page(s):10 - 11  
 Digital Object Identifier 10.1109/MM.2005.17  
[AbstractPlus](#) | Full Text: [PDE\(152 KB\)](#) [IEEE JNL](#)
- ☐ 6. **Design and verification for PCI Express controller**  
 Eugin Hyun; Kwang-Su Seong;  
 Information Technology and Applications, 2005. ICITA 2005. Third International Conference on  
 Volume 1, 4-7 July 2005 Page(s):581 - 586 vol.1  
 Digital Object Identifier 10.1109/ICITA.2005.113  
[AbstractPlus](#) | Full Text: [PDE\(184 KB\)](#) [IEEE CNF](#)

-  **7. Scheduling of MPI-2 One Sided Operations over InfiniBand**  
Wei Huang; Santhanaraman, G.; Hyun-Wook Jin; Panda, D.K.;  
Parallel and Distributed Processing Symposium, 2005. Proceedings. 19th IEEE International  
04-08 April 2005 Page(s):215a - 215a  
Digital Object Identifier 10.1109/IPDPS.2005.391  
[AbstractPlus](#) | Full Text: [PDF](#)(160 KB) IEEE CNF
-  **8. Phase Locked Loop gain shaping for gigahertz operation**  
Iniewski, K.; Magierowski, S.; Syrzycki, M.;  
Circuits and Systems, 2004. ISCAS '04. Proceedings of the 2004 International Symposium on  
Volume 4, 23-26 May 2004 Page(s):IV - 157-60 Vol.4  
[AbstractPlus](#) | Full Text: [PDF](#)(222 KB) IEEE CNF
-  **9. PCI express and advanced switching: evolutionary path to building next generation interconnects**  
Mayhew, D.; Krishnan, V.;  
High Performance Interconnects, 2003. Proceedings. 11th Symposium on  
20-22 Aug. 2003 Page(s):21 - 29  
[AbstractPlus](#) | Full Text: [PDF](#)(270 KB) IEEE CNF
- 



AbstractPlus

[4 View Search Results](#) | [Next Article](#) ▶

Access this document

Full Text: PDF (200 KB)

Download this citation

Choose Citation

Download Endnote, ProCite, RefMan

▶ Learn More

Rights &amp; Permissions



▶ Learn More

[Home](#) | [Login](#) | [Logout](#) | [Access Information](#) | [Alerts](#) | [Shopping](#) | [Help](#)

Wireless United States Patent and Trademark Office

SEARCH

SEARCH

IEEE Xplore GUIDE

SUPPORT

## Can memory-less network adapters benefit next-generation infiniband systems?

Su, S., Vishnu, A., Jin, H.-M., Panda, D.K., Huang, Y.

Dept. of Comput. Sci. &amp; Eng., Ohio State Univ., Columbus, OH, USA

This paper appears in: **High Performance Interconnects, 2005. Proceedings. 13th Symposium on**

Publication Date: 17-19 Aug. 2005

On page(s): 45 - 50

Number of Pages: XII+168

ISSN: 1550-4794

INSPEC Accession Number: 8689833

Digital Object Identifier: 10.1109/CONNECT.2005.10

Posted online: 2005-12-05 08:52:05.0

### Abstract

InfiniBand is emerging as a high-performance interconnect. It is gaining popularity because of its high performance and open standard. Recently, **PCI-Express**, which is the third generation high-performance I/O bus used to interconnect peripheral devices, has been released. The third generation of InfiniBand adapters allow applications to take advantage of **PCI-Express**. **PCI-Express** offers very low latency access of the host memory by network interface cards (NICs). Earlier generation InfiniBand adapters used to have an external DIMM attached as local NIC memory. This memory was used to store internal information. This memory increases the overall cost of the NIC. In this paper we design experiments, analyze the performance of various communication patterns and end applications on **PCI-Express** based systems, whose adapters can be chosen to run with or without local NIC memory. Our investigations reveal that on these systems, the memory fetch latency is the same for both local NIC memory and host memory. Under heavy I/O bus usage, the latency of a scatter operation increased only by 10% and only for message sizes 1B-4 KB. These memory-less adapters allow more efficient use of overall system memory and show practically no performance impact (less than 0.1%) for the NAS parallel benchmarks on 8 processes. These results indicate that memory-less network adapters can benefit next generation InfiniBand systems.

[Index Terms](#)[Inspec](#)

### Controlled Indexing

[computer architecture](#) [file organisation](#) [network interfaces](#) [peripheral interfaces](#)

### Non-controlled Indexing

[InfiniBand](#) [NAS parallel benchmark](#) [NIC](#) [PCI-Express](#) [external DIMM attachment](#) [generation high-performance I/O bus](#) [high-performance interconnect](#) [host memory](#) [memory-less adapter](#) [network interface card](#) [peripheral device](#)

### Author Keywords

Not Available

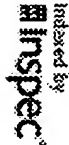
[References](#)

No references available on IEEE Xplore.

Citing Documents

No citing documents available on IEEE Xplore.

[View Search Results](#) | [Next Article](#) ▶



[Help](#) [Contact Us](#) [Privacy & Security](#) [IEEE.org](#)

© Copyright 2015 IEEE. All Rights Reserved

## Refine Search

### Search Results -

Terms	Documents
(PCI adj1 Express\$5) near10 (mode near3 operation\$2)	2

**Database:**

US Pre-Grant Publication Full-Text Database  
US Patents Full-Text Database  
US OCR Full-Text Database  
EPO Abstracts Database  
JPO Abstracts Database  
Derwent World Patents Index  
IBM Technical Disclosure Bulletins

**Search:**

L1

Refine Search

Recall Text

Clear

Interrupt

### Search History

DATE: Tuesday, January 17, 2006   [Printable Copy](#)   [Create Case](#)

**Set Name Query**

side by side

DB=PGPB,USPT,USOC; PLUR=YES; OP=OR

L1   (PCI adj1 Express\$5) near10 (mode near3 operation\$2)**Hit Count Set Name**

result set

2   L1

END OF SEARCH HISTORY

## Refine Search

### Search Results -

Terms	Documents
(PCI adj1 Express\$5) near10 (mode near3 operation\$2)	0

Database:

US Pre-Grant Publication Full-Text Database  
US Patents Full-Text Database  
US OCR Full-Text Database  
EPO Abstracts Database  
JPO Abstracts Database  
Derwent World Patents Index  
IBM Technical Disclosure Bulletins

Search:

L2

Refine Search

Recall Text

Clear

Interrupt

### Search History

DATE: Tuesday, January 17, 2006   [Printable Copy](#)   [Create Case](#)

#### Set Name Query

side by side

#### Hit Count Set Name

result set

DB=EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR

L2   (PCI adj1 Express\$5) near10 (mode near3 operation\$2)

0   L2

DB=PGPB,USPT,USOC; PLUR=YES; OP=OR

L1   (PCI adj1 Express\$5) near10 (mode near3 operation\$2)

2   L1

END OF SEARCH HISTORY

## Refine Search

### Search Results -

Terms	Documents
(PCI adj1 Express\$5) same transmit\$3 same receiver same value same bit	1

Database:

US Pre-Grant Publication Full-Text Database  
 US Patents Full-Text Database  
 US OCR Full-Text Database  
 EPO Abstracts Database  
 JPO Abstracts Database  
 Derwent World Patents Index  
 IBM Technical Disclosure Bulletins

Search:

L3

Refine Search

Recall Text

Clear

Interrupt

### Search History

 DATE: Tuesday, January 17, 2006    [Printable Copy](#)    [Create Case](#)
**Set Name Query**

side by side

**Hit Count Set Name**

result set

DB=PGPB,USPT,USOC; PLUR=YES; OP=OR

L3 (PCI adj1 Express\$5) same transmit\$3 same receiver same value same bit1    L3

DB=EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR

L2 (PCI adj1 Express\$5) near10 (mode near3 operation\$2)0    L2

DB=PGPB,USPT,USOC; PLUR=YES; OP=OR

L1 (PCI adj1 Express\$5) near10 (mode near3 operation\$2)2    L1

END OF SEARCH HISTORY

## Refine Search

### Search Results -

Terms	Documents
(361/679  361/683  361/783  345/520  345/531  709/253  710/100  710/33  710/300  710/301  710/302  710/72  710/306  710/313  326/37).ccls.	10428

**Database:**

US Pre-Grant Publication Full-Text Database  
US Patents Full-Text Database  
US OCR Full-Text Database  
EPO Abstracts Database  
JPO Abstracts Database  
Derwent World Patents Index  
IBM Technical Disclosure Bulletins

**Search:**

L1

**Refine Search****Recall Text****Clear****Interrupt**

### Search History

**DATE:** Tuesday, January 17, 2006   [Printable Copy](#)   [Create Case](#)

**Set Name Query**

side by side .

**Hit Count Set Name**

result set

*DB=PGPB,USPT,USOC; PLUR=YES; OP=OR*

L1   710/100,33,300-302,72,306,313;345/520,531;361/679,683,783;709/253;326/37.ccls.   10428   L1

END OF SEARCH HISTORY



Refine Search

Search Results -

Terms	Documents
L1 and L2	11

Database:

US Pre-Grant Publication Full-Text Database  
US Patents Full-Text Database  
US OCR Full-Text Database

EPO Abstracts Database  
JPO Abstracts Database  
Derwent World Patents Index  
IBM Technical Disclosure Bulletins

Search: L3

Refine Search

Recall Text

Clear

Interrupt

Search History

DATE: Tuesday, January 17, 2006    [Printable Copy](#)    [Create Case](#)

<u>Set Name Query</u> side by side		<u>Hit Count</u>	<u>Set Name</u> result set
DB=PGPB,USPT,USOC; PLUR=YES; OP=OR			
<u>L3</u>	11 and L2	11	<u>L3</u>
<u>L2</u>	(PCI adj1 Express) same mode	57	<u>L2</u>
<u>L1</u>	710/100,33,300-302,72,306,313;345/520,531;361/679,683,783;709/253;326/37.ccls.	10428	<u>L1</u>

END OF SEARCH HISTORY

Refine Search

Search Results -

Terms	Documents
(PCI adj1 Express) same mode	5

Database:

- US Pre-Grant Publication Full-Text Database
- US Patents Full-Text Database
- US OCR Full-Text Database
- EPO Abstracts Database
- JPO Abstracts Database
- Derwent World Patents Index
- IBM Technical Disclosure Bulletins

Search:

L4

Refine Search

Recall Text

Clear

Interrupt

Search History

DATE: Tuesday, January 17, 2006    [Printable Copy](#)    [Create Case](#)

Set Name Query

side by side

DB=EPAB,JPAB,DWPI,TDBD; PLUR=YES; OP=OR

L4    (PCI adj1 Express) same mode

DB=PGPB,USPT,USOC; PLUR=YES; OP=OR

L3    l1 and L2

L2    (PCI adj1 Express) same mode

L1    710/100,33,300-302,72,306,313;345/520,531;361/679,683,783;709/253;326/37.ccls.

Hit Count Set Name

result set

5    L4

11    L3

57    L2

10428    L1

END OF SEARCH HISTORY